Notice of Allowability	Application No.	Applicant(s)	
	09/977,252	SIM, MYUNG SUB	
	Examiner	Art Unit	
	Lawrence B. Williams	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed on 12 April 2005*.

2. ☒ The allowed claim(s) is/are *1-25*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 2.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Oren on 05 August 2005.

The application has been amended as follows:

a.) In claim 1, line 8, delete the "the" before "previous" and replace with "a".

b.) In claim 1, line 15, delete the period at the end of the sentence and add " ; where L and W are integers ."

c.) In claim 4, at the end of line 10, delete the period at the end of the sentence and add " ; where T is an integer ."

d.) In claim 5, at the end of line 10, delete the period at the end of the sentence and add " ; where T is an integer ."

e.) In claim 6, at the end of line 10, delete the period at the end of the sentence and add " ; where T is an integer ."

f.) In claim 8, line 9, delete the "the" before "previous" and replace with "a".

g.) In claim 8, at the end of line 15, delete the period at the end of the sentence and add " ; where W and L are integers ."

h.) In claim 11, at the end of line 10, delete the period at the end of the sentence and add " ; where T is an integer ."

i.) In claim 12, at the end of line 10, delete the period at the end of the sentence and add " ; where T is an integer ."

j.) In claim 13, at the end of line 11, delete the period at the end of the sentence and add " ; where T is an integer ."

k.) In claim 15, line 9, delete the "the" before "previous" and replace with "a".

l.) In claim 15, at the end of line 12, delete the period at the end of the sentence and add " ; where W, W_0, and K are integers ."

m.) In claim 16, at the end of line 4, after the comma and add " and L is an integer ."

n.) In claim 17, in lines 3 and 4, delete the phrase " and N is an integer equal to 0; " and add " and L is an integer; ".

o.) In claim 23, in line 9, delete the phrase " wherein the N is and integer in a range of 0 to N; " and replace with " wherein N, W, W_0, and L are integers; ".

p.) In claim 24, in lines 7-8, delete the phrase " wherein the N is and integer in a range of 0 to N; " and replace with " wherein N, W, W_0, and L are integers; ".

q.) In claim 25, in line 11, delete the period at the end of the sentence and add " , wherein W, W_0, and L are integers; ".

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: Delete the title "Related Art" from Fig. 2. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: The instant application discloses a method and apparatus for decoding turbo codes using a sliding window method. A search of prior art records has failed to disclose "a MAP decoder, comprising: a backward processor that calculates first resultant values of an L-symbol long sequence and second resultant values of a W-symbol long sequence; a forward processor that calculates third resultant values; a memory that stores the second resultant values in a first order and outputs the second resultant values in a second order that is the reverse of the first order" along with the remaining limitations of claim 1. The prior art also does not teach " a method of performing an MAP turbo decoding, comprising: calculating first resultant values of an L-symbol long sequence; calculating second resultant values of a W-symbol long sequence; calculating third resultant values of the W-symbol long sequence; storing the second resultant values in a first order and outputting the stored second resultant values in a second order that is the reverse of the first order" along with the remaining limitation of clam 8. The prior art also does not disclose a method of turbo-decoding a received sequence using a Maximum A Posteriori (MAP) algorithm, comprising: " wherein if a processing length of the backward processor is W and a length of a received bit sequence is K, a length of a first data block W_0 to be processed is determined by the equation KmodW " or "determining a decoding output using the first resultant values and the second resultant values, wherein the W_0 is a remainder obtained by dividing a received sequence by the second processing length W" as disclosed in claims 15 and 25, respectively. The prior art also fails to teach a Maximum A Posteriori (MAP) decoder comprising: "a backward processor for learning for a predetermined length L and calculating first state probability values for a

window length of W_0 of a received sequence from W_0 to 0 or for a window length W of a received sequence from W_0 +(N+1)W to W_0 +NW after the predetermined length L" along with the remaining limitations of claims 23 and 24.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
August 5, 2005

EMMANUEL BAYARD
PRIMARY EXAMINER

FIG. 2
~~Related Art~~

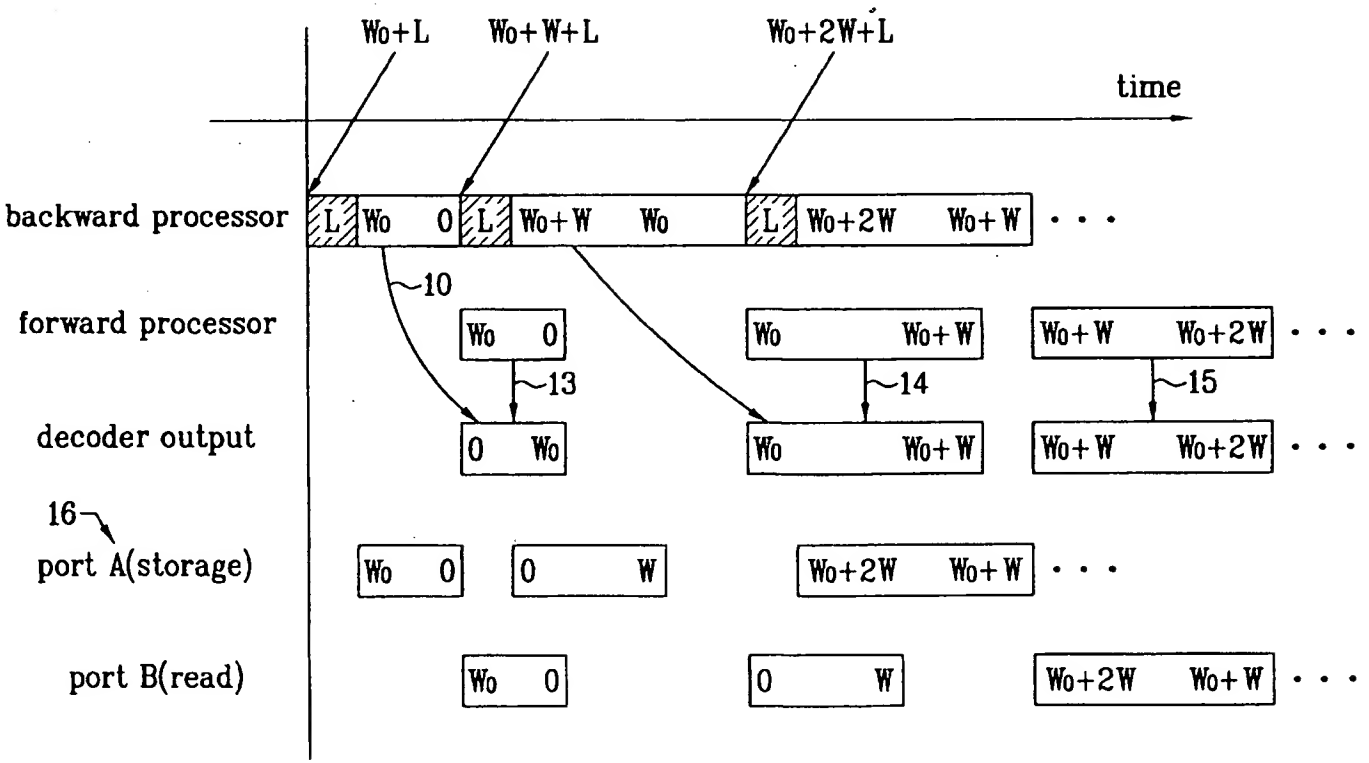

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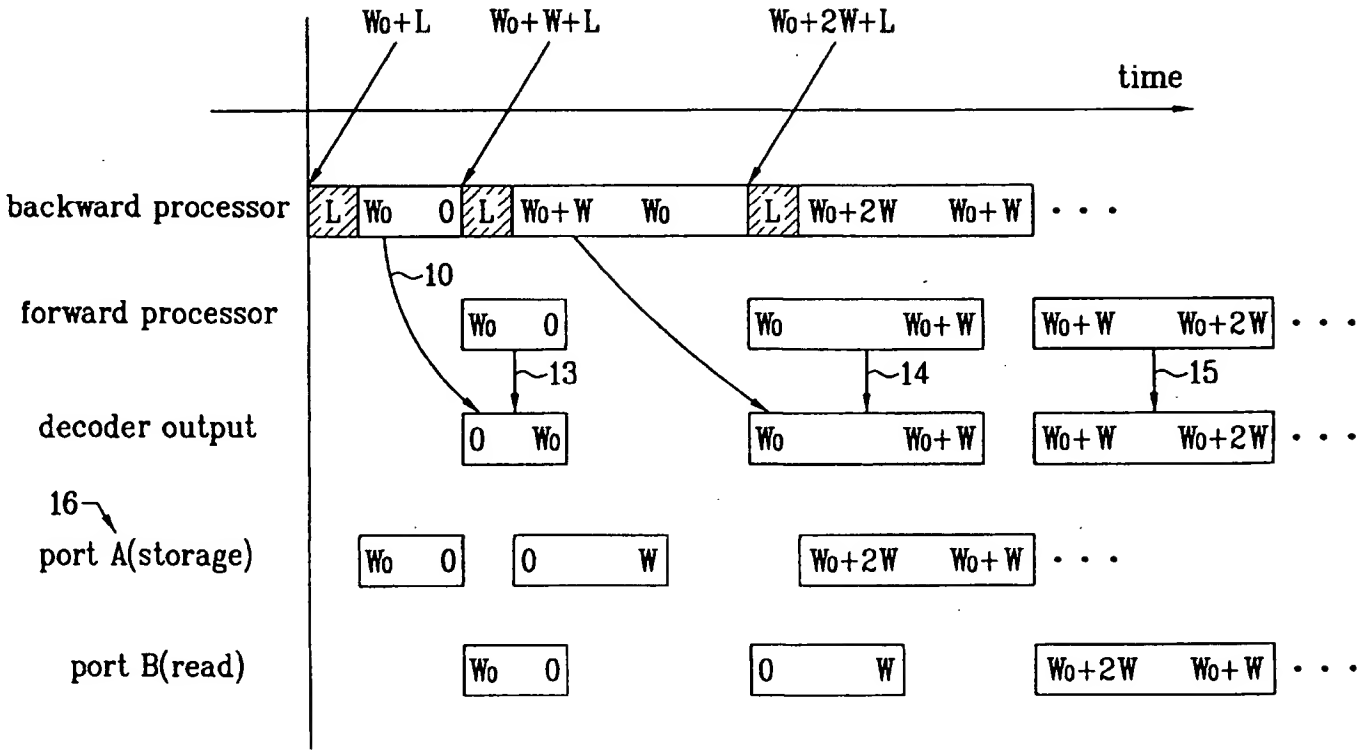
FIG. 2
Related Art



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